

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~High-pressure~~ A high-pressure mercury vapor discharge lamp (1) comprising a lamp vessel (2) made of a transparent ceramic material, enclosing a discharge space (3) comprising an ionizable discharge medium and at least two electrodes (4,5), ~~each provided with an~~ having electrode tip (4a, 5a), ~~which tips that~~ are spaced apart at a mutual distance d, and electrical feed-through elements (6,7) which extend from the at least two electrodes (4,5) to the an exterior of the lamp, ~~characterized in that wherein~~ the distance d between the electrode tips (4a, 5a) is less than 1.0 mm and ~~the a~~ a mercury density in the lamp vessel (2) is higher than 0.3 mg/mm³.

2. (Currently Amended) ~~Lamp~~ The lamp as claimed in claim 1,

~~characterized in that wherein~~ the distance between the electrode tips ~~(4a,5a)~~ ranges from 0.3 to 0.8 mm.

3. (Currently Amended) ~~Lamp~~ The lamp as claimed in claim 1, ~~characterized in that wherein~~ the distance between the electrode tips ~~(4a,5a)~~ ranges from 0.3 to 0.6 mm.

4. (Currently Amended) ~~Lamp~~ The lamp as claimed in claim 1, ~~characterized in that wherein~~ the mercury density in the lamp vessel ~~(2)~~ ranges from 0.3 to 0.8 mg/mm³.

5. (Currently Amended) ~~Lamp~~ The lamp as claimed in claim 1, ~~characterized in that wherein~~ the mercury density in the lamp vessel ~~(2)~~ range from 0.4 to 0.7 mg/mm³.

6. (Currently Amended) ~~Lamp~~ The lamp as claimed in claim 1, ~~characterized in that wherein~~ the lamp vessel ~~(2)~~ comprises a bulging section ~~(8)~~ communicating with at least two feed-through channels ~~(10,11)~~ having an inner diameter smaller than the bulging section ~~(8)~~.

7. (Currently Amended) ~~Lamp~~ The lamp as claimed in claim 6, ~~characterized in that wherein~~ the bulging section ~~(8)~~ is substantially cylindrical over the distance d and has an internal cross-sectional diameter D_i ranging from 1.5 to 4.5 mm and a length L ranging from 4 to 8 mm.

8. (Currently Amended) ~~Lamp~~ The lamp as claimed in claim 6, ~~characterized in that the wherein~~ a wall load on the inside of the lamp vessel (2) during operation ranges from 40 to 150 W/cm².

9. (Currently Amended) ~~Lamp~~ The lamp as claimed in claim 1, ~~characterized in that wherein~~ the ceramic material is chosen from the group consisting of sub-micro polycrystalline aluminum (PCA), yttrium aluminum garnet (YAG), Y_2O_3 , $MgAl_2O_4$, and aluminum nitride (AlN).

10. (Currently Amended) ~~Lighting~~ A lighting apparatus, comprising a main body and at least ~~a the lamp as described in of~~ claim 1.

11. (New) A high-pressure discharge lamp comprising:

a discharge space including an ionizable discharge medium and at least two electrodes having electrode tips which are separated by distance d ;

a lamp vessel enclosing the discharge space; and

feed-through elements which extend from the at least two electrodes to an exterior;

wherein the distance d between the electrode tips is less than 1.0 mm.

12. (New) The high-pressure discharge lamp of claim 11, wherein the ionizable discharge medium includes mercury having a density higher than 0.3 mg/mm^3 .

13. (New) The high-pressure discharge lamp of claim 11, wherein the distance between the electrode tips ranges from 0.3 to 0.8 mm.

14. (New) The high-pressure discharge lamp of claim 11,

wherein the distance between the electrode tips ranges from 0.3 to 0.6 mm.

15.(New) The high-pressure discharge lamp of claim 11, wherein the ionizable discharge medium includes mercury having a density from 0.3 to 0.8 mg/mm³.

16.(New) The high-pressure discharge lamp of claim 11, wherein the ionizable discharge medium includes mercury having a density from 0.4 to 0.7 mg/mm³.

17.(New) The high-pressure discharge lamp of claim 11, wherein the lamp vessel comprises a bulging section communicating with at least two feed-through channels having an inner diameter smaller than the bulging section.

18.(New) The high-pressure discharge lamp of claim 17, wherein the bulging section is substantially cylindrical over the distance d and has an internal cross-sectional diameter D_i ranging from 1.5 to 4.5 mm and a length L ranging from 4 to 8 mm.

19. (New) The high-pressure discharge lamp of claim 11, wherein a wall load inside of the lamp vessel during operation ranges from 40 to 150 W/cm².

20. (New) The high-pressure discharge lamp of claim 11, wherein the lamp vessel is made of a transparent ceramic material chosen from a group consisting of sub-micro polycrystalline aluminum (PCA), yttrium aluminum garnet (YAG), Y₂O₃, MgAl₂O₄, and aluminum nitride (AlN).